

424-9.

Text Book on Corrosion

**TONCAN
METAL**

REVISED AND ENLARGED
WITH
PHOTOS OF PROMINENT INSTALLATIONS
AND SHEET METAL COMPENDIUM

2nd Edition.

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TONCAN
PILTON
SHEET



TONCAN
METAL
SHEETS





Anti-Corrosive Sheets and Formed Products

"CORROSION AND
ITS CAUSE"

With Photos of Prominent Installations and a
Sheet Metal Compendium

The
Stark Rolling Mill Co.
Canton, Ohio

SOLE PRODUCERS



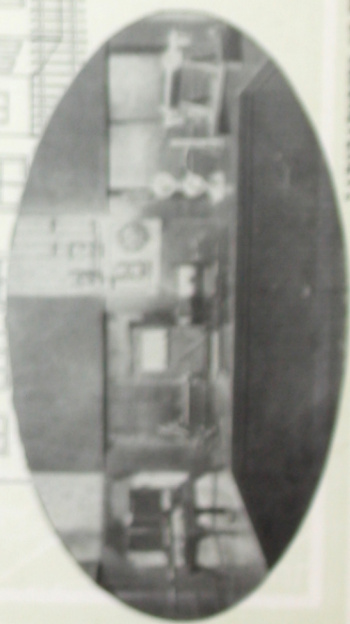
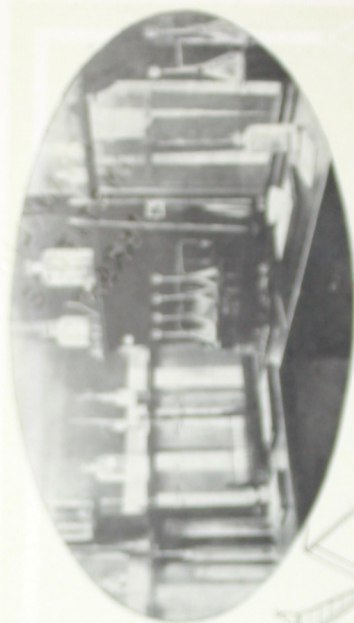
Sheets

Ask Your Jobber

Form 324-25M-10-13

Copyright, 1913, by The Stark Rolling Mill Co., Canton, Ohio.

LONGAN



LABORATORIES OF THE STARK ROLLING MILL CO.
The Best Place of *Longan*

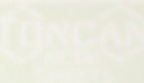
Ruskin says:—

“A composition for cheapness, and not for excellence of workmanship, is the most frequent cause of the rapid decay and entire destruction of arts and manufactures.”

PART I

Technical Information





TECHNICAL SECTION

"Ye Olde Time" Irons

We presume every one has, at one time or another, heard the virtues of "Old Time Irons" extolled. It may be a matter of surprise to know that a modern product made by scientific, rather than haphazard methods, contains not only all the virtues of old time irons but others in addition.

Our Methods

In the manufacture of Toncan Metal we reach the acme of practical efficiency resulting from the wisdom obtained from long experience coupled with scientific knowledge. We furnish a ferrous metal in sheet form, and with all the virtues of the ancient products, plus the strength, ductility, and general workability of modern sheets, and at a price within the reach of all who are willing to pay a small advance over the price of ordinary Steel Sheets.

The Introduction of Mild Steel

After the era of Old Time Irons came the Bessemer and Open Hearth processes and soft or mild steel was added to the catalog of metals. Many of us can remember that the wonderful improvement in reference to toughness, ductility and strength caused these products to be hailed with great joy in the beginning; which joy was later tempered by the sad realization that these virtues had been gained by the sacrifice of that most necessary quality—durability.

The Craze for Tonnage

Nothing will emphasize or illustrate to a greater degree the extent of the mad desire to get maximum tonnage at minimum cost than the sad decadence in quality when comparing the old time hand made irons with the modern "catapulted" product. We say "catapulted" because it is literally shot through from one process to the other; and the metal is in a constantly distorted state and the consequent strains have their inevitable result in the tendency of the metal to rapidly disintegrate under corrosive influences.

Rust and Corrosion

After all the years of research, and notwithstanding the

TECHNICAL SECTION—Continued

improved and scientific metallurgy of Iron and Steel, no product made from iron ore and containing 99% or more of elemental iron is rust-proof. Rust itself represents the union of iron and oxygen, thus forming iron oxide. Iron ore, from which all iron or steel is derived, is iron-oxide in its natural state, so that we perceive in a rusting iron or steel nature's process of preserving the equilibrium of the universe in converting the manufactured products back to the original oxide. This is *rusting*; the student will find after careful investigation that *corrosion* is not the even surface formation of oxide, but the isolated and localized disintegration of the metal, which we sometimes term "pitting." We never heard of Corrosion until Steel was made. The old time irons did not corrode; they rusted. No one can reasonably expect to get a ferrous metal free from rusting, and it is our experience that no one would object to the slow uniform process of nature, termed "rusting" which can be largely prevented or minimized by a protective coating.

Chemical Electrolysis

The theory of chemical electrolysis has never been disproved, although eminent Chemists and Metallurgists have sought to do so. On the contrary, it is more generally accepted than ever before. According to this well established theory, corrosion is due to the electrolytic action taking place between segregations, which are groups of impurities scattered through the metal. In ordinary iron and steel sheets the metallic impurities represent a percentage varying from .40% to 1.25%, and in addition this high percentage of impurities will be found collected in groups rather than uniformly diffused throughout the sheet. Toncan Metal has an almost infinitesimal fractional percentage of metallic impurities; the Carbon, for instance, rarely exceeding .01% as compared with an average of .12% to .18% carbon in Steel sheets. In addition, this small percentage of impurities is thoroughly and uniformly diffused throughout the whole sheet. There are no groups to act as poles, inciting the

TECHNICAL SECTION—Continued

galvanic action which occurs between a negative and a positive pole upon the application of moisture. It is owing to this action that the material is drawn away from one spot in a sheet of high impurities and improper workmanship and deposited or placed at another spot, leaving pit holes and producing corrosion deposits, or cones, giving the sheet a "tubercular" appearance.

Toncan Metal is anti-corrosive because its purity, care in physical manipulation, and its subjection to proper caloric influences, its density and homogeneity all render it practically immune to the action of chemical electrolysis.

The Conservation of Metals

The corrosion of the iron and steel as commonly made today is a serious problem. It necessitates frequent repairs and replacements, especially in sheet metal form. Due to this short life and consequent drain on raw materials the supply of available high grade ore is being rapidly depleted, so that the problem is not only individual but general. With the disappearance of our forests we are turning to iron; when iron becomes exhausted we have nothing else available for a satisfactory building material.

Trees may be propagated by reforestry, but as regards minerals we have only what was originally placed within our reach and we cannot expect to create one ounce more. Consider the growing demand for iron occasioned by the continued shortage of wood and the increasing population of all nations and think what a vast quantity must be mined to take care of the requirements. We are actually burning the candle at both ends, and with the constantly increased tonnage of pig iron we must use more and more ore to make a ton of pig. Every ton of Toncan Metal used today means many more tons of ore for the use of those who follow us.

Efficiency

The great consideration in industrial lines today is efficiency. This condition in human life is reached or approximated by increasing the positive and decreasing the negative qualities. We follow closely these lines when we eliminate

TECHNICAL SECTION—Continued

the poisonous impurities and conserve and accentuate by careful heat treatment and physical manipulation the ductility, workability, and durability of the material.

How Corrosion May be Eliminated

Corrosion, or the rapid destruction of any iron or steel product, may be eliminated and its action prevented by proper and scientific methods of manufacture. Accepting the universal explanation that corrosion is due to a difference in electrical potential of the various impurities in the elemental iron we find that the higher the percentage of impurities the greater is the segregation which is bound to occur as a result of this high percentage. The electrical potential is intensified so that corrosion soon destroys the product. The surface of the sheet becomes "tubercular."

The factors entering into the manufacture of an anti-corrosive product (none of which may be omitted or slighted) are: Careful selection of raw materials; combining same in right proportions and with scientific heat treatment in the furnaces; special refining process for elimination of metallic and gaseous impurities to a degree hitherto considered impossible in commercial practice.

Excessive Conditions

In this respect it might be well to call the student's attention to the fact that no iron or steel product may be properly expected to withstand conditions which wood, stone or porcelain, or the "noble metals" alone can undergo.

The atmospheric conditions, as an average, are exceedingly more injurious today than during the period of the manufacture of old time irons, but nevertheless Toncan Metal, low in impurities and manufactured in strict accordance with normal methods of heating and rolling, will withstand the climatic and atmospheric effects of today fully as well as the old time irons withstood the milder conditions then existing.

No "Royal Road"

Attempts have been made in recent years to produce a

TECHNICAL SECTION—Continued

sheet metal which will withstand corrosive influences in a manner similar to Toncan Metal, but to omit the purity, the care and scientific treatment, and to reach the desired end by adding impurities which will withstand the action of acid, but as far as anyone knows will not improve the durability of the product in actual service. Indeed it is likely that the action of these added impurities will decrease the life of such materials in actual service. The elimination of impurities alone in Toncan Metal would not produce the desired results, but coupled with the careful heat treatment and scientific care in the physical treatment of the metal the resulting product is immune from corrosion to a degree even greater than the old time iron products. It would be possible to produce a sheet metal with the metallic purity of Toncan Metal, which would be but little if any better than steel, because of the absence of well regulated careful heat treatment and physical manipulation in the rolling-process, the material being so dead and brittle that it could not be commercially used.

A Word of Caution

The buyer should use every precaution against the use of any steel sheet products which have been doped with added ingredients in order to make such material stand an accelerated acid test. It is possible by the addition of certain metals to make an iron product with one specific purpose in view, and that is, to resist the acid test, but the acid test only. All good things have been abused and the acid test is no exception; therefore, unless it is applied to pure homogeneous sheet iron products like Toncan Metal and is used by skilled operators, it is not a reliable source of information because of the duplicity of competitors who have used a dope or have physically maltreated test specimens submitted in competition with their own product. Toncan Metal resists the acid test because of its purity, homogeneity, proper heat treatment and the care used in every process of its manufacture and not because

TECHNICAL SECTION—Continued

additional ingredients have been added to secure just one result, i. e., resistance to the acid test.

Protective Coatings

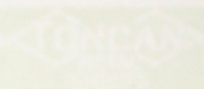
Granted that the natural oxidation or rusting is catalytic or auto-protective we will all agree that rust is at times unsightly or otherwise unsatisfactory. This may be minimized by the application of a protective coating. This coating may either be a scientifically devised paint, a zinc, a tin or terne coating. The method of hot zinc coating is termed "Galvanizing." Zinc makes an excellent protective coating because of its moderate cost, ease of uniform application and high resistance to atmospheric influences.

Non-Solubility of Toncan Metal

In connection with zinc coating or galvanizing it is well to bear in mind that Steel as ordinarily used in the manufacture of sheet products is quite soluble in molten zinc, and when the Steel sheet is passed through the bath a small percentage of the sheet itself is dissolved and forms an alloy of iron and zinc. This, of course, becomes part of the coating of subsequent sheets and this coating is much more subject to atmospheric influences than a pure zinc coating. Toncan Metal, because of its purity and the extreme care in its treatment all through, is insoluble in molten zinc. We are therefore able to produce Galvanized Toncan Metal Sheets having a coating of pure zinc; one of the best inhibitive coatings so far developed.

The Factor Value of a Coating

We have explained that a meritorious product may be increased in value and its merit intensified by the proper application of a scientifically devised and carefully applied coating. Regardless, however, of the coating applied to any product made from iron ore, the life of the product depends ultimately upon the base, because no coating is infallible, and in the application and during the service the coating is often impaired. A small surface defect in the coatings brings the base into contact with atmospheric conditions,



TECHNICAL SECTION—Continued

which nowadays are acid to a relatively high degree, requiring the use of a better base metal than needed prior to the last decade. This emphasizes the necessity of a durable base.

Contact with Other Metals

In the use and application of any iron base sheets, care should be exercised that no connection is made with or no metal which may be of a different elemental nature brought into contact with the iron base material. For instance, copper nails driven through iron or steel roofing set up a strong galvanic action, causing early dissolution of the material in the immediate vicinity of the nails. Similarly, copper Eaves Trough or Conductor Pipe in contact with iron or steel roofing and siding will develop this tendency. Copper alone, or used in connection with copper, is undoubtedly good, although extremely high priced, but it should be kept away from iron or steel. Toncan Metal, possessing strength to a far greater degree than copper, and being relatively cheap as compared with copper, may consistently be used in all high grade work with the assurance that its value and service will commend it in most instances as a worthy substitute for copper, and in every instance to be used in preference to commercial iron or steel products.

The Service Record

The service record of Toncan Metal is such that it is not necessary now to depend entirely upon scientific conclusions as to what the material will do. It has proven that it will withstand atmospheric and climatic conditions to a much greater degree than the present iron or steel products. This fact is substantiated by the universal employment of Toncan Metal, as can be noted on the pages devoted to a few of the installations. Some of the best known and most conservative Engineers and Architects are represented by these buildings. The material used is their choice—the result of their exhaustive tests, investigations and research.

Gladstone said:—

“One example is worth a thousand arguments.”

PART II

Illustrative of some of the many
meritorious qualities and
properties of



and showing
a few of the many
prominent installations

EXHIBIT A



A Section of the Test Fence

The photographic reproductions on pages 14, 15, 16, and 17 show the superiority of Toncan Metal over steel by actual results in a service test.

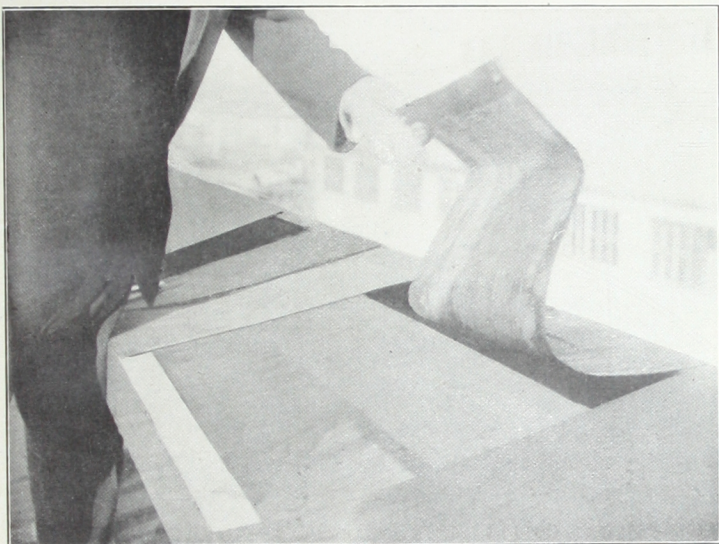
In connection with our research laboratory we maintain a test fence on which we try out under actual and accelerated conditions all kinds of sheet metals.

The photo shown above is the remains of a steel sheet tested for almost eleven months under exactly identical conditions as the Toncan Metal Sheet shown on the next page.

The steel sheet is falling into pieces, being practically destroyed by corrosion and having almost no strength or life remaining. Note how an ordinary pencil can be pushed through the disintegrated steel sheet.

See affidavit on page 18.

EXHIBIT B



Another Section of the Test Fence

Here we see a Toncan Metal Sheet without paint, galvanizing or other protection, full of strength and life after being tested under conditions identical with those described on the preceding page.

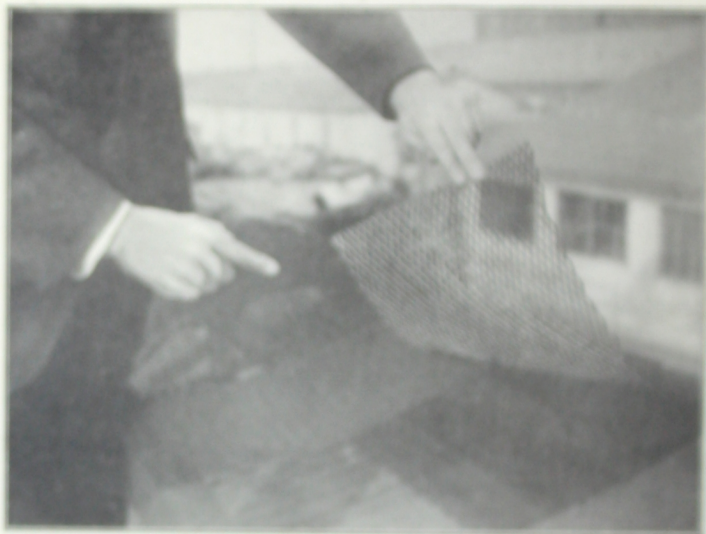
Both this sample and the one shown on page 14 show rust or oxidation, thus justifying our argument in favor of a protective coating, either paint or zinc spelter (galvanizing).

A good sheet protected by a reliable surface coating gives permanent results.

A poor sheet, even though coated, lasts only as long as the coating, causing excessive labor charges for frequent repair and replacements.

See affidavit on page 18.

EXHIBIT C



Portion of Test Fence

One of the most difficult tests to withstand is to cause a sheet to be perforated and then expanded or stretched out into expanded metal or lath, and then expose the uncoated lath to severe atmospheric or other influences.

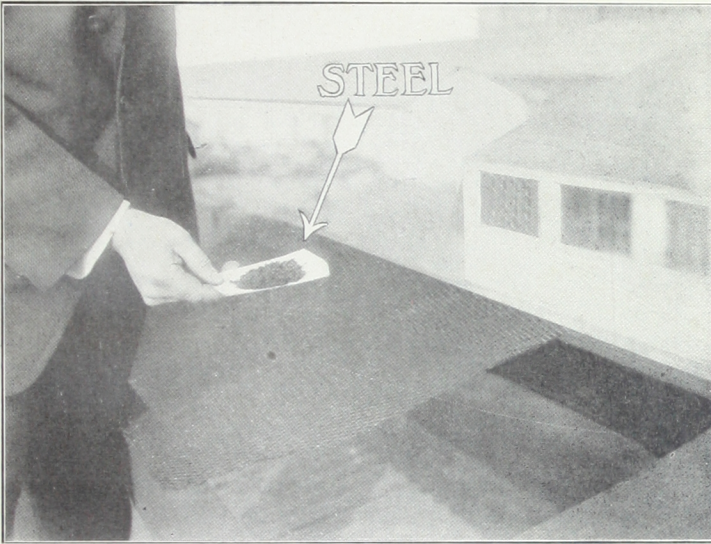
This photo shows a sheet of Toncan Metal Lath, strong and ductile, almost as good in every way as when placed on test fence 11 months previous.

For reinforced or stucco work, or wherever expanded metal is desired, Toncan Metal Lath should be used.

It may be obtained plain, painted or galvanized, and in any style, and will give prolonged and satisfactory service as compared with steel.

See affidavit on page 18.

EXHIBIT D



Partial View of Test Fence

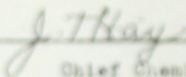
This photograph shows a handful of rusted fragments tested under conditions identical with those to which the Toncan Metal Lath shown on the previous page were subjected. The original gauge in both cases was No. 24 U. S. standard or .025 inches thick. This exhibit is so conclusive that no comment is needed.

Sections of the service tested samples may be secured by addressing us.


See affidavit on page 18.

State of Ohio)
) ss
County of Stark)

Personally appeared before me
A. E. Hockwalt, Notary Public in and for State of
of Ohio, Stark County, J. T. Hays, who being
sworn says that on *January 9th 1912* he
personally placed samples of one pass cold rolled
steel and Toncan Metal sheets, uncoated, on the
test fence maintained by Research Dept. of Stark
Rolling Mill Co., and on *November 22nd 1912*
he took photographs marked exhibits A-B-C and D
and that said photographs represent the actual
condition of these sample sheets after exposure
for *10 months and 18 days* to atmospheric
influences and the weather, and subject to no
other influence..


Chief Chemist

Subscribed and sworn to before me this 10th day
of June A. D. 1913.


Notary Public.

Photographs described as Exhibits A, B, C, and D, are
those shown on pages 14, 15, 16 and 17 of this book.

On the following page the samples of Toncan Metal, Char-
coal Iron and Steel have been subjected under identical con-
ditions to the Accelerated Sulphuric Acid Test. While the
test of time can alone demonstrate fully the matter of dura-
bility, there can be no question that the Sulphuric Acid Test,
properly applied, demonstrates that a well made iron pro-
duct without the aid of any "dope" or surface hardening
will inherently resist extreme corrosive influence.

Loss During Test

No. 1



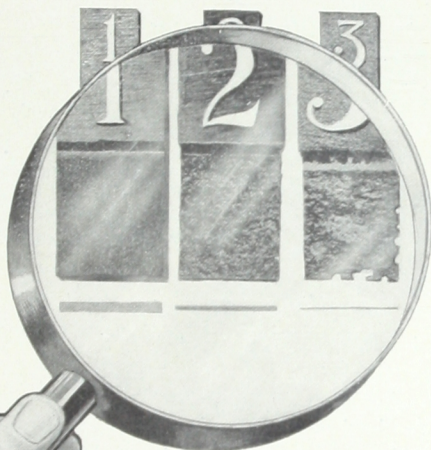
2 $\frac{1}{4}$ per cent

No. 2 Charcoal
Iron

44 per cent

No. 3 Steel

88 per cent



Innate and inherent purity whether in man or metal will always vindicate itself at the expense of hypocritical make-shifts. You can always be sure and safe if you order and use Toncan Metal.



Kelly Island
Lime and
Transport Co.,
White
Rock, O.
Toncan
Metal
Roofing and
Siding.

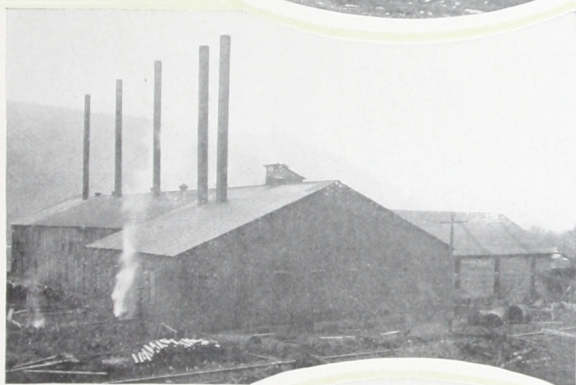
Plant of the
Oxford
Copper Co.,
Raymond,
N. J.
Toncan Metal
Roofing



High Grain
Elevator,
Ashland,
Eats
Roofing and
Siding all
Toncan Metal

TONCAN
METAL
SHEETS

National
Chemical Co.,
Lyman Run,
Pa.
Toncan Metal
Roofing and
Siding.



National
Chemical Co.,
Lyman Run,
Pa.
Completely
Covered with
Toncan Metal.

Gaffney Wood
Products Co.,
Walton, Pa.
Toncan Metal
Roofing and
Siding.





View of
The Keystone
Glue Co.,
Williamsport,
Pa.,
Toncan Metal
Roofing.



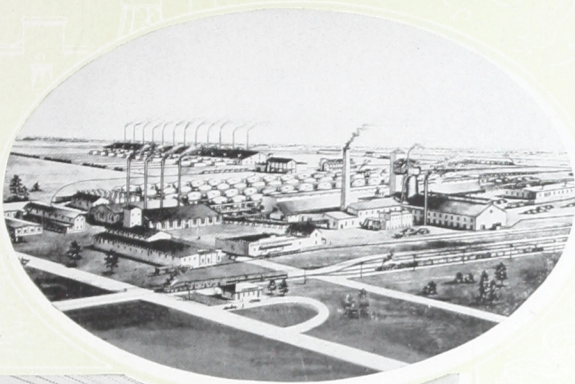
The Storage
Battery Co.,
Phila., Pa.
Part of
Plant Toncan
Metal Roofing.



View of
The Keystone
Glue Co.,
Milwaukee,
Wis.,
Toncan Metal
Roofing.

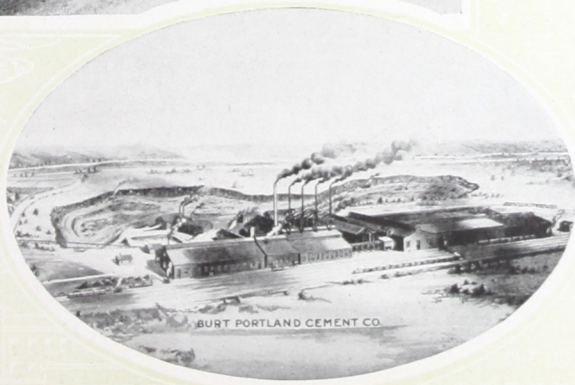
TONCAN
METAL
SHEETS

The Lake
Superior Iron
& Chemical
Co., at
Newberry,
Mich.
Cast House
Roofed with
Toncan Metal.



Plant of
The Taylor-
Boggis
Foundry Co.,
Cleveland, O.
Toncan Metal
Ferro-Lithic
Roof.

Burt Portland
Cement Co.,
Bellevue,
Mich.
Toncan Metal
Roofing and
Siding.



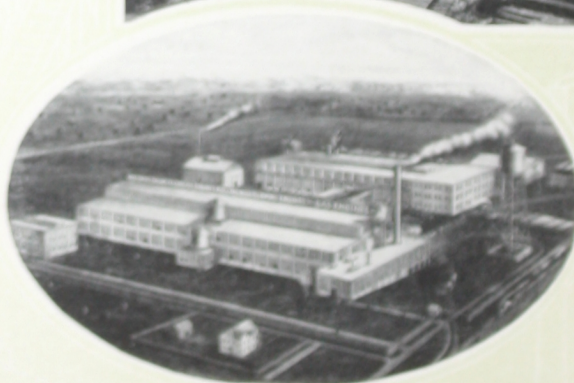
BURT PORTLAND CEMENT CO.

TONCAN METAL SHEETS



Skylights of
Toncan Metal
in Main
Tower
Plant of
The American
Writing
Paper Co.,
Holyoke,
Mass.

Michigan
Alkali Co.,
Alpena, Mich.
Toncan Metal
Roofing and
Siding.



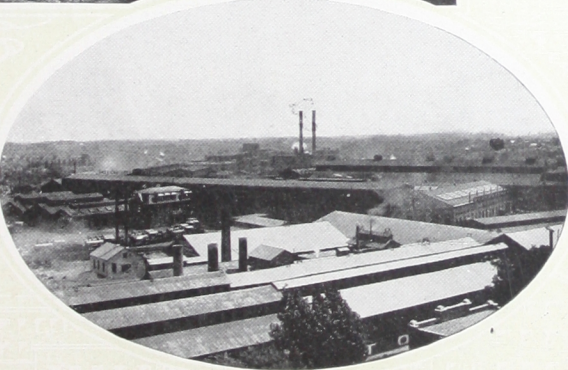
Plant of the
Wisconsin
Engine Co.,
Corliss, Wis.
Toncan Metal
Roofing.

Plant of
The Joseph
Dick Mfg.
Co.,
Canton, O.
Toncan Metal
Flashing,
Trough,
Pipe, Etc.



The Hocking
Mine No. 2
of Monon
Coal Co.,
near
Farmersburg,
Ind.
Roofing and
Siding of
Toncan Metal.

Works of
American
Locomotive
Co.,
Dunkirk,
N. Y.
Toncan Metal
used for
Roofing.



TONCAN
METAL
SHEETS



National
Carbon Co.,
Crouse
Tremaine
Works,
Postoria,
Ohio.
Toncan Metal
Roofing.

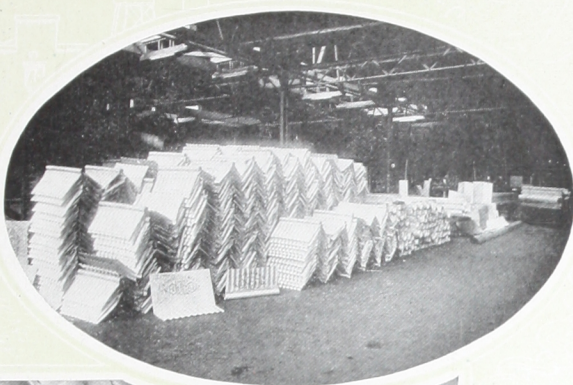


The American
Sugar
Refinery Co.,
Boston, Mass.
All Sheet
Metal
Work
Toncan Metal.



Plant of
The Standard
Sanitary
Mfg. Co.,
Toronto,
Canada.
Toncan Metal
for Roofing.

Toncan Metal
Ridge Roll,
Flashings,
Gutters and
Conductors all
for U. S.
Coaling
Station,
Pearl Harbor,
Hawaii.
(U. S. Navy
Dept.).



Baird
Machine
Co.,
Bridgeport,
Conn.
Toncan Metal
Skylights.

Lima State
Hospital,
Lima, Ohio.
Toncan Metal
used for all
Sheet Metal
Work (nearly
100 tons).





Central R. R.
of New
Jersey
Train Shed,
Opposite
Liberty St.
Ferry,
New York
City.
Tunican Metal
Roofing and
Siding.

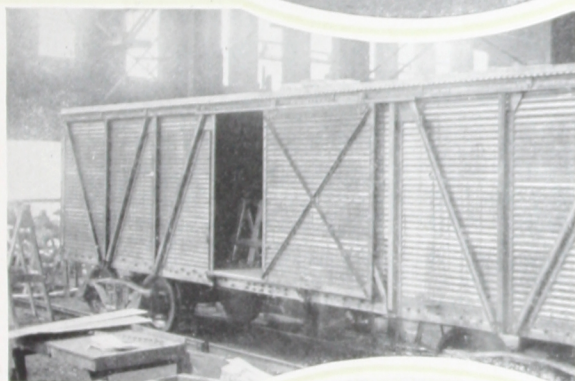
Section of
San Diego
Train, on the
San
Diego and
Santa Fe
R. R.
Tunican Metal
for all Street
Metal Work.



U. S. & W.
Freight Pier,
No. 64 North
River,
New York.
Tunican Metal
Roofing.

TONCAN
METAL
SHEETS

L. E. & W.
Depot,
New Castle,
Ind.
All Sheet
Metal Work
Toncan Metal.



Side View
All-Metal
Box Car,
Toncan Metal
Roof, Sides
and Ends,
Made by
American
Car and
Foundry Co.

The American
Locomotive
Co.,
Dunkirk,
N. Y.
Toncan Metal
used for
Roofing.





Syracuse,
Lake Shore
& Northern
E. R.,
Syracuse,
N. Y.
Toncan Metal
Roofing.



Car Barn of
Fairmount
and
Clackburg
Traction Co.,
Charlottesville,
W. Va.
Toncan Metal
for Roofing
and Siding.



Part of
Shelter or
Umbrella
Sheds
Pa. E. R. Co.,
at
Greensburg,
Pa.
Roof and
Sides of
Galvanized
Toncan Metal.

Union
Passenger
Station,
Mendota, Ills.
Platform
Covered with
Toncan Metal
Roofing.



Another View
Car Barn of
Fairmount
and
Clarksburg
Traction Co.,
Clarksburg,
W. Va.
Toncan Metal
Roofing and
Siding.

New Shops
"Cotton
Belt Route,"
St. Louis
S. W. Ry.,
Pine Bluff,
Ark.
More than
1000 sqrs.
Toncan Metal
Siding.





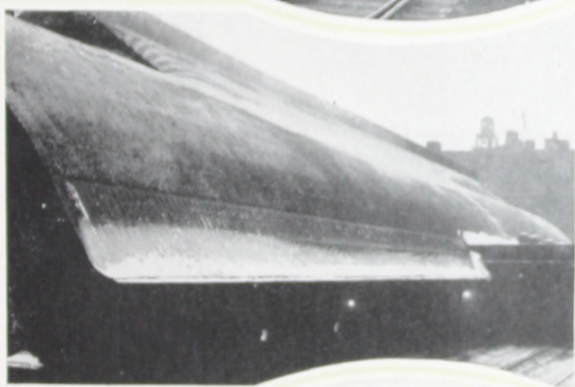
Round House,
Boston and
Maine R. R.,
Boston, Mass.
Toncan Metal
Roofing.

The Union
Station,
Worcester,
Mass.
Street Metal
Work and
Toncan Metal
on Umbrella
Shelters.



New Car Barn
of the
Houston-
Galveston
Interurban
Ry.,
Houston,
Texas.
Toncan Metal
for Roofing.

R. F. & P. Ry.
Shop at
Richmond,
Va.
Toncan Metal
Roofing and
Siding.



Terminal
Train Sheds,
B. & O. R. R.
Chicago, Ill.
Toncan Metal
Roof.

Building of
Syracuse,
Lake Shore
R. R. Co.,
Syracuse,
N. Y.
Toncan Metal
Roofing.



TONCAN
METAL
SHEETS



Street Car
Barns of
The
Connecticut
Co.,
New Haven,
Conn.
Toncan Metal
for all
Sheet Metal
Work.

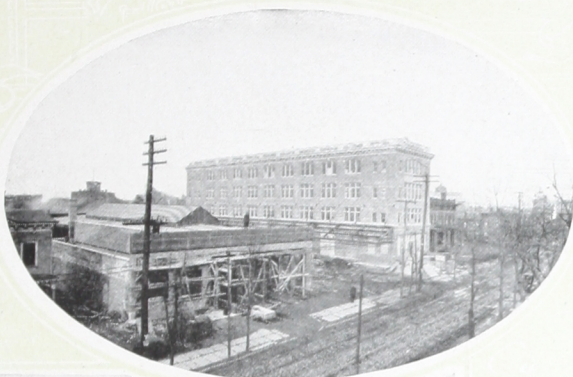
Northern
Station
Boston &
Maine R. R.,
Boston, Mass.
Toncan Metal
Roof on Train
Shed.



General
Office
Building and
Round House
of the
L. E. W. R.
at
Indianapolis,
Ind.
Toncan Metal
Roofing on
Round House.

TONCAN METAL SHEETS

Terminal
Car Barns,
Public Service
Corporation,
Jersey City,
N. J.
Toncan Metal
for all Sheet
Metal Work.

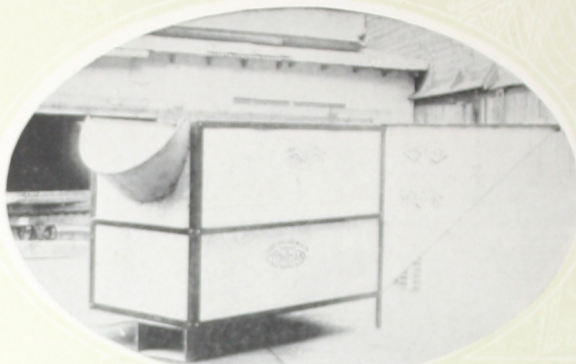


R. F. & P. Ry.
Shop at
Richmond,
Va.
Roofing,
Siding,
Trough and
Pipes, all of
Toncan Metal.

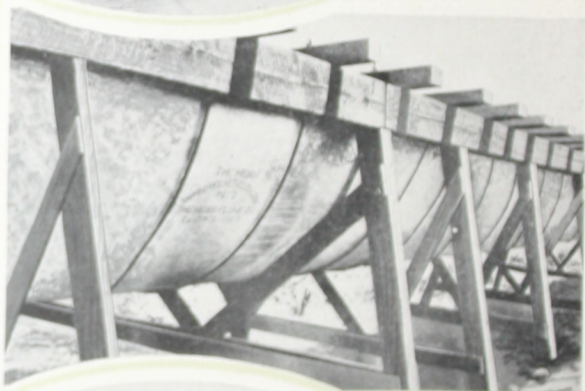
Engine House
of N. Y. C. &
H. R. R. at
Watertown,
N. Y.
Toncan Metal
Ventilating
System.



TONCAN
METAL
SHEETS



Toncan Metal
Stilling Pool
made by
The Hess
Flume Co.,
Denver, Colo.

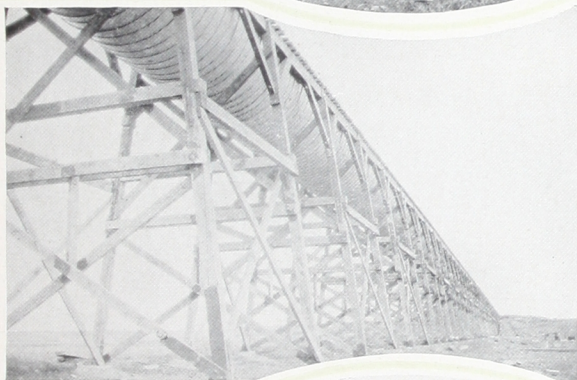
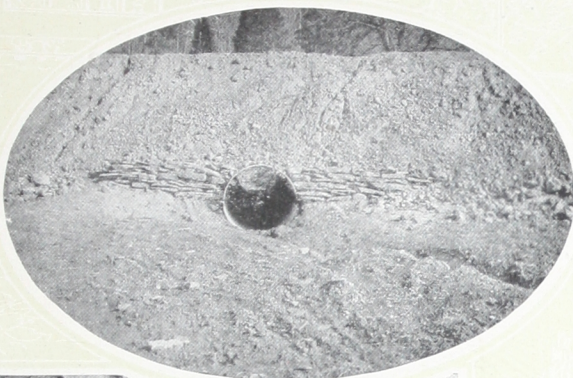


Toncan Metal
Flumes,
Hess Flume
Co.,
Denver, Colo.



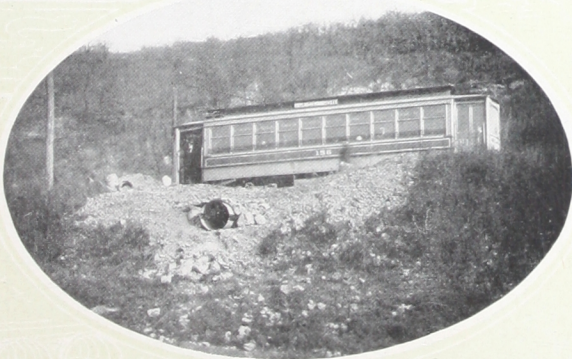
Toncan Metal
Flume built
for Crocker
Hoffman
Land &
Water Co.,
Merced, Cal.

No. 42 Acme
Nestable
Culvert,
Parkersburg,
W. Va.

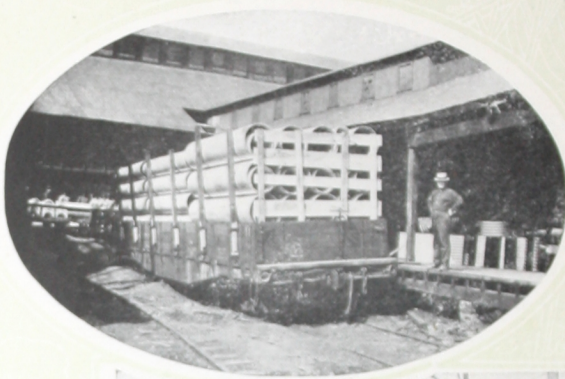


Toncan Metal
Flumes,
Hess Flume
Co.,
Denver, Colo.

Toncan Metal
Culvert under
Wheeling &
Moundsville
R. R., near
Wheeling,
W. Va.



TONCAN
METAL
SHEETS



Toncan Metal
Sells Car Loads
of
Culverts.

Using Toncan
Metal
where Steel
could not
Live.



Toncan Metal
Flumes
erected in
N. Dakota,
Washington
and Montana
by the
Hess Flume
Co.,
Denver,
Colo.

Toncan Metal
Intakes and
Flumes being
Installed on
Medina
Valley
Irrigation
Project near
San Antonio,
Texas, by
The Hess
Flume Co.,
Denver, Colo.

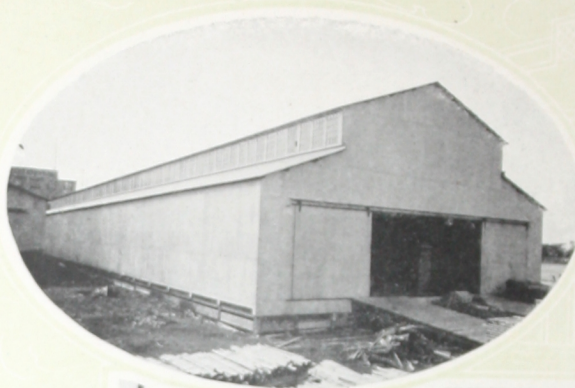


Another View
of Medina
Valley Co.
Flumes near
San Antonio,
Texas.

Toncan Metal
Culverts
under
Charlotte
Harbor &
Northern Ry.
in Florida.
Made by
Florida
Metal
Products Co.,
Jacksonville,
Fla.



TONCAN METAL SHEETS



Storage Sheds
of Paine
Lumber Co.,
Oshkosh, Wis.
Roofing and
Siding all
Toncan Metal.

Dreamland
Theatre,
formerly the
"Ice Palace,"
Chicago, Ills.
Toncan Metal
Roofing.



Dreamland
Theatre
Building,
St. Louis, Mo.
All Cornices,
Cresting,
Valleys,
Trough and
Pipe made of
Toncan Metal.

TONCAN
METAL
SHEETS

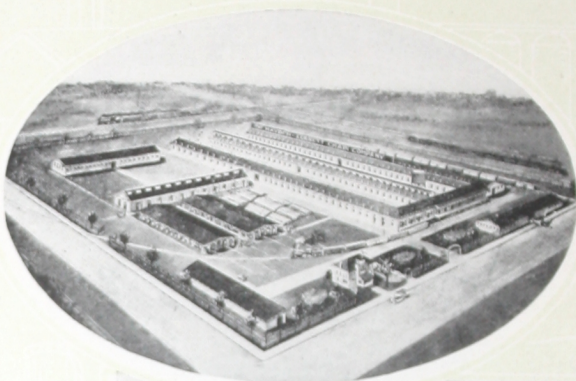
The Bromo-
Seltzer Bldg.,
Emerson
Drug Co.,
Baltimore,
Md.
38 Tons of
Toncan Metal
Used in
Construction
of Bottle
on Tower.



New Bureau
Engraving and
Printing,
Washington,
D. C.
Toncan Metal
used for
Metal Windows.

Electric
Sign made of
Toncan Metal
on Stack at
plant of
Morgan
Engineering
Co.,
Alliance,
Ohio.





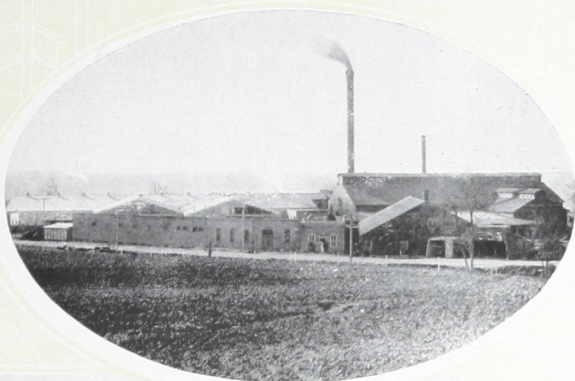
The Hayden-
Corbett
Chain Co.,
Columbus, O.,
Roofing and
Siding of
Toncan Metal.

Portion of
Plant of
Dominion
I. & S. Co.,
Sydney,
Nova Scotia.
Toncan Metal
Roofing.



The Seneca
Chain Co.
Plant,
Kent, O.
1800 Squares
Toncan Metal
Roofing and
Siding.

Indiana
Rolling
Mill Co.,
New Castle,
Ind.
Roofing and
Siding of
Toncan Metal.



Plant of the
Union Rolling
Mill Co.,
Cleveland, O.
Completely
covered with
Toncan Metal
in 1908-1909.

Plant of The
Blairsville
Enameled
Ware Co.,
Blairsville, Pa.
Toncan Metal
Roofing and
Siding.



TONCAN METAL SHEETS



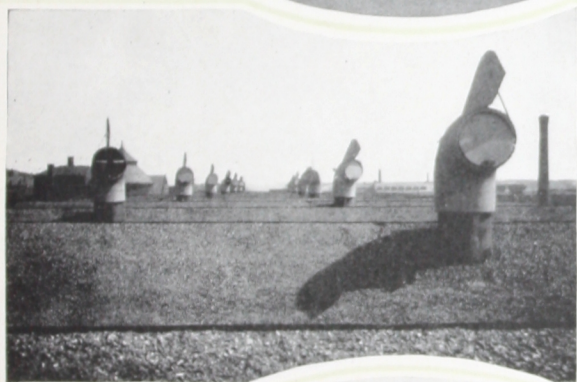
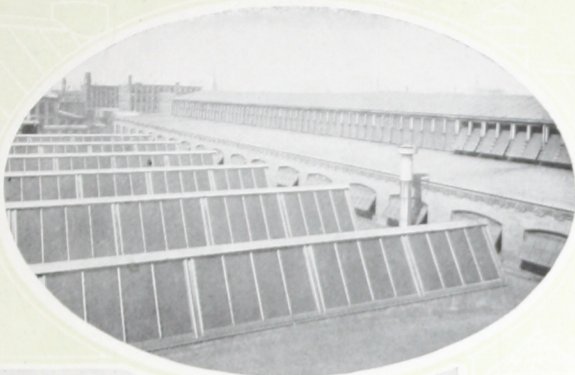
Toncan Metal
Tank,
Kerrville,
Texas.

Freeport Gas
Machine Co.,
Freeport, Ill.,
Gas Machines
Made of
Galvanized
Toncan Metal
Sheets.



Brick Pallets
made of
Toncan Metal.
In use in The
Riverside Fuel
& Supply Co.,
Fremont, Ohio.

Deane Steam
Pump Co.,
Holyoke,
Mass.
Skylights
all of
Toncan Metal.



William
Skinner's
Sons,
Holyoke,
Mass.
Toncan Metal
Ventilators.

American
Printing Co.,
Fall River,
Mass.
All Sheet
Metal Work
Toncan Metal.



TONCAN
METAL
SHEETS



The Furniture
Exchange,
44th St., near
Lexington
Ave.,
New York
City.
Sheet Metal
Work
Toncan Metal.



Montgomery
Hotel,
San Jose,
Calif.
Toncan Metal
Cornices.



Hotel
El Tovar,
Grand
Canyon, Ariz.
All Sheet
Metal Work
Toncan Metal.
The famous
"Fred Harvey
System."

St. Martha's
School,
Galesburg,
Ills.
Sheet Metal
Work all
Toncan Metal.



The Howe
School,
Schenectady,
N. Y.
All Sheet
Metal Work
Toncan Metal.

Christian
Science
Church,
Berkeley, Cal.
Toncan Metal
Roofing



TONCAN
METAL
SHEETS



Galvez Hotel,
Galveston,
Texas.
Sheet Metal
Work
Toncan Metal.

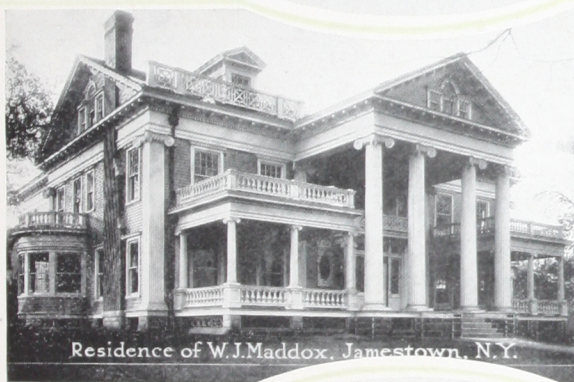


Home of
E. C. Aller,
Napoleon,
Ohio.
All Sheet
Metal Work
Toncan Metal.



The Statler
Hotel,
Cleveland, O.
Air Washing
Plant of
Toncan Metal.

Residence of
Jno. Krainik,
Manitowoc,
Wis.
Roof, Trough
and Pipe of
Toncan Metal.



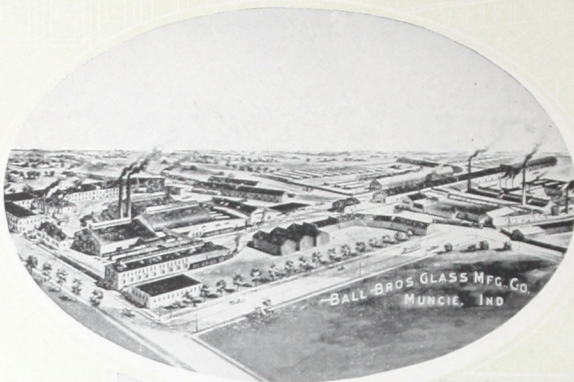
Residence of
W. J. Maddox,
Jamestown,
N. Y.
Sheet Metal
Columns
Made of
Toncan Metal.

Residence of W.J.Maddox, Jamestown, N.Y.

State
Hospital,
Danvers,
Mass.
All Sheet
Metal Work
Toncan Metal.

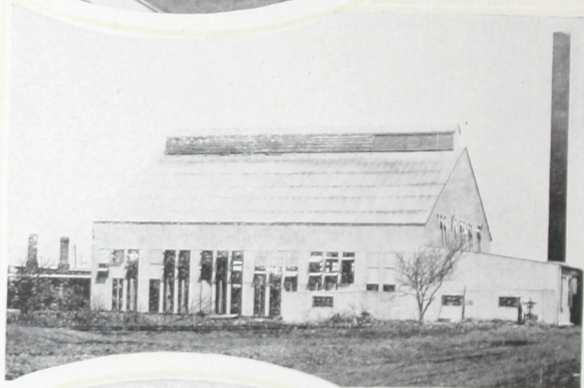


TONCAN METAL SHEETS



Ball Bros.
Glass Mfg.
Co.,
Muncie, Ind.
Covered with
Toncan Metal
Roofing.

Plant of the
Pierce Glass
Co.,
Hamburg,
N. Y.
Roofed and
Sided with
Toncan Metal.



Factory of
North
Baltimore
Bottle Glass
Co.,
Terre Haute,
Ind.
Roofed and
Sided with
Toncan Metal.

Plant of the
Kittanning
Plate Glass
Co.,
Kittanning,
Pa.
Roofed with
Toncan Metal.



Part of
Plant of the
Kittanning
Plate Glass
Co.,
Kittanning,
Pa.

The Wilcox
Glass Bottle
Co.,
Wilcox, Pa.
Toncan Metal
Roofing and
Siding.





"THE BEST GUARANTEE IS THE KNOWLEDGE YOU DON'T
NEED A GUARANTEE."—Printers' Ink.





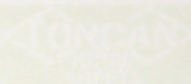
SECTION THREE

CATALOG



SHEETS *and* PRODUCTS

This Trade Mark  *Stenciled on every Sheet
and Die-Stamped on every Formed Product*




FLAT SHEETS





BLACK

GALVANIZED

Trade Mark Stenciled on Every Sheet

To meet all the requirements of modern sheet metal practice  Sheets can be used to the greatest possible advantage. They are rust-resisting, tough, pliable and ductile, standing the strains and stresses of shaping, forming and working without fracturing. In cost they are less than Charcoal Iron yet superior to it in both wearing and working qualities, not excepting the genuine old-time Swedish iron.

 plain, painted or galvanized, is shipped in bundles containing same number of sheets as similar gauges and sizes steel sheets based on standard table of weights for iron. See page 66.

 Sheets can be furnished in the following sizes:

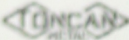
Black—No. 7 to 16; Widths—Up to 48" wide

Black—No. 18 to 26; Widths—Up to 36" wide

Galv.—No. 12 to 16; Widths—Up to 48" wide

Galv.—No. 18 to 28; Widths—Up to 36" wide

Black and Galvanized. Lengths—144" long or less

Each sheet bears  Trade Mark. Accept no substitute.

We are originators and sole producers.

ASK YOUR JOBBER



ROOFING

CORRUGATED, PAINTED OR GALVANIZED



2 1/2-INCH CORRUGATED SHEETS

5/8 in. deep, 26 in. wide.

All gauges 16 and lighter, 5, 6, 7, 8, 9, 10, 11 and 12 feet long.

2-INCH CORRUGATED SHEETS

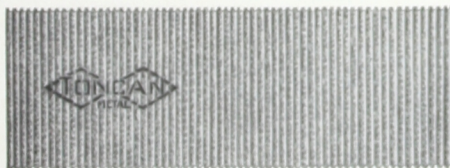
1/2 in. deep, 26 in. wide.

Gauges 16 and lighter, 5, 6, 7, 8, 9 and 10 feet long.

1 1/4-INCH CORRUGATED SHEETS

3/8 in. deep, 25 in. wide.

All gauges 22 and lighter, 5, 6, 7, 8, 9 and 10 feet long.




1/8-INCH CRIMP SHEET

Gauges 24 and lighter.


Sheets of any length crimped crossways up to 36 in. wide.



This cut shows size of crimp.

 Sheets are not furnished lighter than No. 28 Gauge Galvanized; No. 26 Gauge Plain or Painted.

ASK YOUR JOBBER

See Page 68 for Directions "How to Order  Roofing"



ROOFING

PAINTED OR GALVANIZED



ROLL ROOFING, ALL STYLES



PRESSED STANDING SEAM ROOFING

5, 6, 7, 8, 9 or 10-foot lengths.




V-CRIMPED ROOFING

Made in 2 and 3 V's.

5, 6, 7, 8, 9, 10, 11 or 12 ft. long. Lays 24 in. center to center.

The above are not furnished lighter than No. 28 Gauge Galvanized; No. 26 Gauge Plain or Painted.

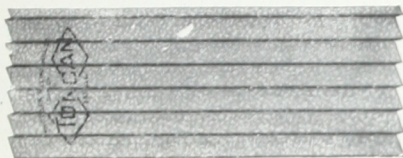
ASK YOUR JOBBER

See Page 68 for Directions "How to Order  Roofing"



SIDING

PAINTED OR GALVANIZED



WEATHER BOARD SIDING

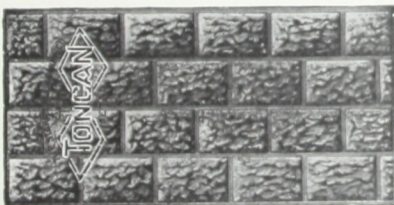
Sheets 24 x 96 inches

Boards 4 inches wide



IMITATION PRESSED BRICK SIDING

Sheets, 28 x 60 inches.




IMITATION ROCK FACED STONE SIDING

Sheets, 28 x 60 inches.

Imitation Rock Faced Brick Siding also furnished in same size sheets.

The above are not furnished lighter than No. 28 Gauge Galvanized; No. 26 Gauge in Plain or Painted.

ASK YOUR JOBBER

See Page 68 for Directions "How to Order  Roofing"



CURVED CORRUGATED SHEETS

PAINTED OR GALVANIZED



In all gauges 16 to 26 inclusive, curved in accordance with specifications given; any degree up to a full circle.



Shows application of curved corrugated sheets on floor beams for ceilings, etc., with concrete filling above sheets.

CORRUGATED SHEETS FOR AWNINGS

Single or Double Curved

We also supply corrugated sheets, single or double curved, for awnings. As a permanent awning these are unequalled.



Single Curved Corrugated Sheet for Awnings

The above are not furnished lighter than No. 26 Gauge Galvanized; No. 26 Gauge Plain or Painted.

ASK YOUR FOUNDER



EAVES TROUGH

FILLS A LONG FELT WANT

PERMANENT

DURABLE

ECONOMICAL



Cut of Slip Joint

Single or Double Bead; Slip Joint or Lap Joint; 10 ft. lengths

LIST PRICES

Adopted Aug. 15, 1912.

28 Gauge



Size.	Single Bead.		Double Bead.	
	Slip Joint Per Ft.	Lap Joint Per Ft.	Slip Joint Per Ft.	Lap Joint. Per Ft.
3 in.	\$0.16	\$0.15	\$0.19	\$0.18
3½ in. ....	.17	.16	.20	.19
4 in. ....	.19	.18	.22	.21
4½ in. ....	.21	.20	.24	.23
5 in. ....	.22	.21	.25	.24
6 in. ....	.27	.25	.30	.28
7 in. ....	.32	.30	.35	.33
8 in. ....	.36	.34	.39	.37

Prices for heavier than No. 28 Gauge quoted on application.

The above is not furnished lighter than No. 28 Galvanized.

Look for this Trade  Mark die-stamped
on every length.

ASK YOUR JOBBER

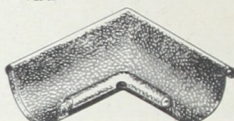
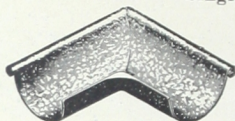
Remember!—No  Sheet is made lighter than full weight
No. 28 Gauge, so that all  Eaves Trough is heavy and strong.
This in itself is of the highest importance.



MITERS AND DROPS

GALVANIZED

Inside or Outside Miters
Slip or Lap Joint
Single or Double Bead



When ordering Miters, specify whether inside or outside, and whether right or left hand; otherwise half of each will be shipped.

LIST PRICES—ONE-PIECE EAVES TROUGH MITERS

Single Bead, Lap Joint, Per Doz.

Size, inches	3½	4	4½	5	6	7	8
28 Gauge	\$3.25	3.50	4.00	4.00	5.00	6.50	8.00
26 Gauge	4.00	4.25	4.75	4.75	6.00	8.00	9.50

Single Bead Slip Joint, Per Doz.

Size, inches	3½	4	4½	5	6	7	8
28 Gauge	\$4.25	4.50	5.00	5.00	6.00	7.50	9.00
26 Gauge	5.00	5.25	5.75	5.75	7.00	9.00	10.50

Double Bead, Lap Joint, Per Doz.

Size, inches	3½	4	4½	5	6	7	8
28 Gauge	\$4.25	4.50	5.00	5.00	6.00	7.50	9.00
26 Gauge	5.00	5.25	5.75	5.75	7.00	9.00	10.50

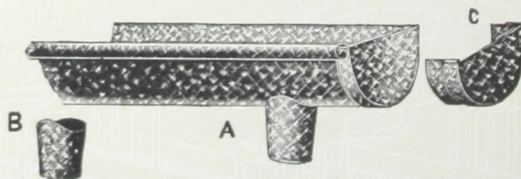
Double Bead, Slip Joint, Per Doz.

Size, inches	3½	4	4½	5	6	7	8
28 Gauge	\$5.25	5.50	6.00	6.00	7.00	8.50	10.00
26 Gauge	6.00	6.25	6.75	6.75	8.00	10.00	11.50

Two-Piece Miters are special, prices on application.

For other gauges Two-Piece Miters only are furnished, on which net price will be quoted.

ENDS, DROPS AND CAPS



GALVANIZED

All Die-Stamped with Trade Mark and Maker's Name



CONDUCTOR PIPES GALVANIZED



PLAIN ROUND



ROUND CORRUGATED



SQUARE CORRUGATED

All sizes from 2 to 6 inches can be nested in one crate.

LIST PRICES—Adopted Aug 15, 1912

28 Gauge

Size, inches	1½	2	2½	3	3½	4	5	6
Plain Round, per ft.	\$0.13	.15	.16	.17	.20	.23	.28	.33
Round Corrugated, per ft.	...	.15	...	.17	...	.23	.28	.33
Square Corrugated, per ft.	...	.17	...	.19	...	.45	.30	...

SQUARE PIPE SIZES

Size, 2 in. Dimensions, 1¾x2¼ in. Size, 4 in. Dimensions, 2¾x4¼ in.
Size, 3 in. Dimensions, 2¾x3¼ in. Size, 5 in. Dimensions, 3¾x5 in.

Odd sizes not listed take list of next larger girth.

Heavier than No. 28 gauge and larger than 6 inch will be quoted on application.

Pipe heavier than No. 28 will be shipped in either 8 or 10-foot lengths unless ordered otherwise.

Round Corrugated will always be shipped unless ordered otherwise.

The above is not furnished lighter than No. 28 Gauge.

Look for this Trade  Mark die-stamped
on every length.

ASK YOUR JOBBER



ELBOWS, SHOES, ETC.

GALVANIZED

Plain, Round or Square Corrugated Elbows and Shoes in all Sizes and Angles



No. 0—30°



No. 1—45°



No. 2—60°



No. 3—75°



No. 4—90°



No. 3 Shoe—75°

PLAIN ROUND

SQUARE CORRUGATED



No. 3—75°



No. 3 Shoe—75°



No. 3—75°



No. 3 Shoe—75°

LIST PRICE PER DOZEN—Effective Oct. 1st, 1913

Size, inches	2	3	4	5	6
Round Corrugated and Plain Round Elbows, No. 28 Gauge.....	\$4.80	5.76	9.00	17.40	21.00
Round Corrugated and Plain Round Shoes, No. 28 Gauge.....	6.00	7.20	10.80	19.80	24.00
Square Corrugated Elbows, No. 28 Gauge	7.20	8.40	10.80	16.20	.....
Square Corrugated Shoes, No. 28 Gauge	9.00	10.20	13.20	19.20	.....

The above are not furnished lighter than No. 28 Gauge.

Galvanized Cut-Offs

Size, inches	2	2½	3	4	5	6
Plain Round, 28 Gauge.....	\$7.00	7.50	8.00	11.00	20.00	24.00
Round Corrugated, 28 Gauge	7.50	8.00	8.00	11.00	20.00	24.00

Nothing lighter made than full weight No. 28 Gauge.

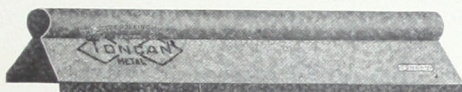
ASK YOUR JOBBER



RIDGE ROLL AND V-ANGLE RIDGE CAP

PAINTED OR GALVANIZED

10-Foot Lengths



ROUND RIDGE ROLL



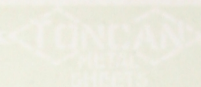
V-ANGLE RIDGE CAP

LIST PRICE PER LINEAL FOOT

Style.	Diam. Roll.	Width of Apron.	Girth.	Galvanized.	Painted.
Round	1½ in.	2 in.	8 in.	\$0.18	\$0.16
Round	2 in.	2½ in.	10 in.	.21	.19
Round	2½ in.	3 in.	12 in.	.25	.23
Round	3 in.	3½ in.	14 in.	.30	.28
V-Angle	.....	3 in.	6 in.	.15	.13
V-Angle	.....	3½ in.	7 in.	.16	.14
V-Angle	.....	4 in.	8 in.	.18	.16

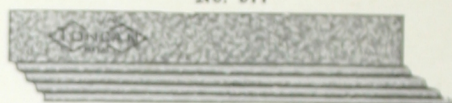
We can furnish  Corrugated Ridge Roll in 10 ft. lengths. Prices on application.

ASK YOUR JOBBER



CORRUGATED FLASHING AND CORRUGATED RIDGE ROLL

No. 977



CORRUGATED SIDE WALL FLASHING

Any length up to	120"
Standard Girth	14"

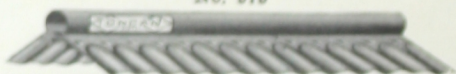
No. 978



CORRUGATED END WALL FLASHING

Total length	26"
Covering length	24"
Flat side on wall	2"
Corrugated Apron	4"
Total Girth	12"

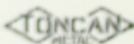
No. 979



2-INCH CORRUGATED RIDGE ROLL

Total length	26"
Covering length	24"
Diameter of roll	2"
Width of Corrugated Apron	4"

Can be furnished in lengths up to 10 ft. also.



Trade Mark Stenciled on Above

No. 28 is lightest gauge material furnished.

NET PRICES—CORRUGATED FLASHINGS AND RIDGE ROLL

		Painted.	Galvanized.
28 gauge.	Per lineal foot		\$0.06 1/2
26 gauge.	Per lineal foot	\$0.06 1/2	.07 1/2
24 gauge.	Per lineal foot .....	.07	.08
22 gauge.	Per lineal foot .....	.08 1/2	.10
20 gauge.	Per lineal foot .....	.10	.12
18 gauge.	Per lineal foot .....	.12	.14

No Discount.

ROOFING AND SIDING

STANDARD WEIGHTS PER SQUARE

Galvanized

Gauge Number	27	26	25	24	23	22	21	20	18	16
2, 2½, 3 and 5 in. Corrugated	85	91	98	111	124	138	151	165	178	232
5/8 and 1¼ in. Corrugated	87	94	101	129	157	185	217	271		
V-Crimped, without Sticks	85	91	98	125	152	179	210	264		
3 V-Crimped, without Sticks	88	95	102	130	158	186	218	272		
Pressed Standing Seam, with Cleats	87	94	101	128	156	184	216	270		
Roll Roofing, without Cleats	88	95	102	130	158	186	218	272		
Roll and Cap Roofing, with Caps and Cleats	93	100	106	134	162	190	222	276		
Beaded Ceiling	85	91	98	125	152	179	210	264		
Weatherboard Siding	88	95	102	130	158	186	218	272		
Plain Brick Siding	78	85	91	128	156	184	216	270		
Rock Face Brick and Stone Siding	79	86	92							

Painted

Gauge Number	28	27	26	25	24	23	22	21	20	18	16
2, 2½, 3 and 5 in. Corrugated	68	76	83	96	110	123	136	150	163	217	271
5/8 and 1¼ in. Corrugated	72	79	86	100	114	128	142	156	170		
V-Crimped, without Sticks	70	76	83	110	137	164	191	218			
3 V-Crimped, without Sticks	72	79	86	113	141	169	197	225			
Pressed Standing Seam, with Cleats	73	79	86	114	142	170	198	226			
Roll Roofing, without Cleats	72	79	86	114	142	170	198	226			
Roll and Cap Roofing, with Caps and Cleats	77	84	91	119	147	175	203	231			
Beaded Ceiling	70	76	83	110	137	164	191	218			
Weatherboard Siding	72	79	86	113	141	169	197	225			
Plain Brick Siding	64	71	77	103	129	155	181	207			
Rock Face Brick and Stone Siding	65	72	78								

You get full weight material when you use



U. S. STANDARD GAUGE

No. of Gauge.	Thickness in Inches, Fractions.	Weight Square Foot, Iron.	No. of Gauge.	Thickness in Inches, Fractions.	Weight Square Foot, Steel.
7-0's	1-2	20.00	13	8-32	3.75
6-0's	15-32	18.75	14	5-64	3.825
5-0's	7-16	17.50	15	9-128	3.1875
0000	13-32	16.25	16	1-16	2.8125
000	3-8	15.00	17	9-160	2.56
00	11-32	14.375	18	1-20	2.295
0	5-16	12.50	19	7-160	2.04
1	9-32	11.25	20	3-80	1.785
2	17-64	10.625	21	11-320	1.50
3	1-4	10.00	22	1-32	1.58
4	15-64	9.375	23	9-320	1.4025
5	7-32	8.75	24	1-40	1.275
6	13-64	8.125	25	9-320	1.125
7	3-16	7.50	26	1-50	1.02
8	11-64	6.875	27	3-160	.865
9	5-32	6.25	28	11-640	.765
10	9-64	5.625	29	1-64	.75
11	1-8	5.00	30	9-640	.6875
12	7-64	4.375			.6375
					.57875
					.51

Allowable Variation

Owing to the impossibility of rolling sheets to exact weights, an allowable variation is customary, No. 17 and lighter, 2½%; No. 16 and heavier, 5%.
The weight per square foot for iron is applicable to Toncan Metal.

Maximum Sizes on Sheet and Jobbing Mill Products Applicable to TONCAN METAL


Width, inches	48	46	44	42	40	38	36	34	32	30	28	26	24
Gauge,													
No. 7 and 8	120	120	120	120	120	120	120	120	120	120	120	120	120
No. 9 and 10	168	168	168	168	168	168	168	168	168	168	168	168	168
No. 11 and 12	168	168	168	168	168	168	168	168	168	168	168	168	168
No. 13 and 14	156	156	156	156	156	156	156	156	156	156	156	156	156
No. 15 and 16	156	156	156	156	156	156	156	156	156	156	156	156	156
No. 17 and 18	144	144	144	144	144	144	144	144	144	144	144	144	144
No. 19 and 20	144	144	144	144	144	144	144	144	144	144	144	144	144
No. 21	144	144	144	144	144	144	144	144	144	144	144	144	144
No. 22	144	144	144	144	144	144	144	144	144	144	144	144	144
No. 23 and 24	144	144	144	144	144	144	144	144	144	144	144	144	144
No. 25 and 26	144	144	144	144	144	144	144	144	144	144	144	144	144
No. 27	144	144	144	144	144	144	144	144	144	144	144	144	144
No. 28	144	144	144	144	144	144	144	144	144	144	144	144	144
Above sizes apply to Black and Galvanized except in latter our maximum length is 144 inches.	144	144	144	144	144	144	144	144	144	144	144	144	144



NO. OF CORRUGATED SHEETS IN ONE SQUARE

(100 Sq. Ft., No Allowance for Laps)

Length of Sheet.	2, 2 1/2, 3 and 5-inch Corrugations. (Sheet 26 in. Wide.)	5/8 and 1 1/4 inch Corrugations. (Sheet 25 in. Wide.)
60 inches	9.231	9.600
72 inches	7.692	8.000
84 inches	6.593	6.857
96 inches	5.769	6.000
108 inches	5.128	5.333
120 inches	4.616	4.800
144 inches	3.846	4.000

Remember—It's just as important to get full gauge roofing as to get full size or count, and  Roofing is always full standard weight and gauge.

NO. OF SQ. FT. IN ONE CORRUGATED SHEET

(Standard Lengths)

Length of Sheet.	2, 2 1/2, 3 and 5-inch Corrugations. (Sheet 26 in. Wide.)	5/8 and 1 1/4 inch Corrugations. (Sheet 25 in. Wide.)
60 inches	10.833	10.416
72 inches	13.000	12.500
84 inches	15.166	14.583
96 inches	17.333	16.666
108 inches	19.500	18.750
120 inches	21.666	20.833
144 inches	26.000	25.000



RULES OF MEASUREMENT

In Selling Sheet Metal Building Material

All Roofings, Siding, Ceiling, etc., except Galvanized material, are painted both sides, unless otherwise ordered.

All Roofings, Siding and Ceiling are sold by the square (100 square feet), except Corrugated Iron, which is sold by the square or pound, as preferred.

A square consists of 100 square feet, and is calculated by the following rules of measurement:

Corrugated Sheets and Imitation Brick.—The full width and length of sheets, after being corrugated or formed, is calculated.

V-Crimped, Beaded and Weather Boards.—The full length of sheets, together with the actual covering width, is calculated.

Standing Seam Roofing.—The actual covering width and full length is calculated, whether the sheets are connected by end locks and shipped in rolls, or separate and shipped in crates.

Wide Gutters and Valleys.—The full width and length of material is calculated.

Nails, Wood Strips, Dry Paint and Ready Mixed Paints are sold by the pound, gallon or square (the amount generally required in applying a square). They are not included in the price quoted on the Sheet Metal but are charged as separate items when furnished.

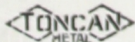
Ridge Roll, Ridge Cap, Corrugated Wood Strips, Corner Boards, Panel Strips, Window and Door Case Coverings, Mouldings, Stylings, Eaves Trough, Conductor Pipes, etc., are sold by the lineal foot, and not included in prices quoted on Roofings and Sidings, but when furnished are charged separately.



GALVANIZED SHEETS, STANDARD SIZES

Average Weight Per Sheet and Per Bundle in Pounds

GAUGES	12			14			16			18			20			22		
SIZE OF SHEET	Wt. per Sheet	Wt. per Bundle	No. Sheets	Wt. per Sheet	Wt. per Bundle	No. Sheets	Wt. per Sheet	Wt. per Bundle	No. Sheets	Wt. per Sheet	Wt. per Bundle	No. Sheets	Wt. per Sheet	Wt. per Bundle	No. Sheets	Wt. per Sheet	Wt. per Bundle	No. Sheets
24 x 72	54.37	163	3	39.3	157	4	31.8	159	5	25.9	155	6	19.9	159	8	16.9	152	9
26 x 72	58.91	177	3	42.6	171	4	34.5	138	4	28.0	140	5	21.5	151	7	18.3	146	9
28 x 72	63.44	127	2	45.9	138	3	37.2	149	4	30.2	151	5	23.2	162	7	19.7	158	8
30 x 72	67.97	136	2	49.2	148	3	39.8	159	4	32.3	162	5	24.8	149	6	21.1	148	7
36 x 72	81.56	163	2	59.1	177	3	47.8	143	3	38.8	155	4	29.9	149	5	25.3	152	6
24 x 84	63.44	127	2	45.9	138	3	37.2	149	4	30.2	151	5	23.2	162	7	19.7	158	8
26 x 84	68.69	137	2	49.7	149	3	40.2	161	4	32.7	163	5	25.1	151	6	21.3	149	7
28 x 84	74.00	148	2	53.5	161	3	43.4	174	4	35.2	141	4	27.1	135	5	23.0	161	7
30 x 84	79.30	159	2	57.4	172	3	46.5	139	3	37.7	151	4	29.0	145	5	24.6	148	6
36 x 84	95.16	190	2	68.9	138	2	55.8	167	3	45.3	136	3	34.8	139	4	29.5	148	5
24 x 96	72.50	145	2	52.5	157	3	42.5	170	4	34.5	138	4	26.5	159	6	22.5	157	7
26 x 96	78.53	157	2	56.8	171	3	46.0	138	3	37.4	149	4	28.7	143	5	24.4	146	6
28 x 96	84.55	169	2	61.2	184	3	49.6	149	3	40.2	161	4	30.9	155	5	26.2	157	6
30 x 96	90.62	181	2	65.6	131	2	53.1	159	3	43.1	172	4	33.1	166	5	28.1	141	5
36 x 96	108.75	209	1	78.7	157	2	63.7	127	2	51.8	155	3	39.8	159	4	33.8	169	5
24 x 120	90.62	181	2	65.6	131	2	53.1	159	3	43.1	129	3	33.1	166	5	28.1	141	5
26 x 120	98.15	196	2	71.1	142	2	57.5	173	3	46.7	140	3	35.9	143	4	30.5	152	5
28 x 120	105.71	211	2	76.5	153	2	62.0	186	3	50.3	151	3	38.6	155	4	32.8	164	5
30 x 120	113.28	113	1	82.0	164	2	66.4	133	2	53.9	162	3	41.4	166	4	35.2	141	4
36 x 120	135.94	136	1	98.4	197	2	79.7	159	2	64.7	129	2	49.7	149	3	42.2	169	4
GAUGES	24			26			27			28			29			30		
24 x 72	13.9	153	11	10.9	152	14	10.1	132	13	9.4	150	16	8.62	147	17	7.9	150	19
26 x 72	15.0	150	10	10.8	153	13	11.0	154	14	10.2	152	15	9.34	149	16	8.5	145	17
28 x 72	16.2	146	9	12.7	152	12	11.8	154	13	10.9	153	14	10.06	151	15	9.2	147	16
30 x 72	17.3	156	9	13.6	149	11	12.7	152	12	11.7	152	13	10.78	162	15	9.8	148	15
36 x 72	20.8	146	7	16.3	147	9	15.2	152	10	14.1	155	11	12.94	155	12	11.8	154	13
24 x 84	16.2	146	9	12.7	152	12	11.8	154	13	10.9	153	14	10.06	151	15	9.2	147	16
26 x 84	17.5	140	8	13.7	151	11	12.8	153	12	11.8	154	13	10.90	153	14	10.0	149	15
28 x 84	18.9	151	8	14.8	148	10	13.8	152	11	12.8	153	12	11.74	153	13	10.7	150	14
30 x 84	20.2	142	7	15.9	159	10	14.8	148	10	13.7	150	11	12.58	151	12	11.5	149	13
36 x 84	24.3	146	6	19.0	152	8	17.7	159	9	16.4	148	9	15.09	151	10	13.8	152	11
24 x 96	18.5	148	8	14.5	145	10	13.5	148	11	12.5	150	12	11.50	149	13	10.5	157	15
26 x 96	20.0	160	8	15.7	157	10	14.6	146	10	13.5	149	11	12.46	150	12	11.4	148	13
28 x 96	21.6	151	7	16.9	152	9	15.7	157	10	14.6	146	10	13.41	148	11	12.3	147	12
30 x 96	23.1	162	7	18.1	145	8	16.9	152	9	15.6	156	10	14.37	144	10	13.1	144	11
36 x 96	27.8	166	6	21.8	152	7	20.3	162	8	18.8	150	8	17.25	155	9	15.8	157	10
24 x 120	23.1	162	7	18.1	145	8	16.9	152	9	15.6	156	10	14.37	144	10	13.1	144	11
26 x 120	25.0	150	6	19.6	157	8	18.3	146	8	16.9	152	9	15.57	156	10	14.2	156	11
28 x 120	27.0	162	6	21.1	148	7	19.7	157	8	18.2	146	8	16.77	151	9	15.3	153	10
30 x 120	28.9	145	5	22.7	159	7	21.1	148	7	19.5	156	8	17.97	162	9	16.4	144	9
36 x 120	34.7	173	5	27.2	163	6	25.3	152	6	23.4	164	7	21.56	151	7	19.7	158	8



AT ALL JOBBERS



Black Sheets, Standard Sizes. Weights Without Bands

GAUGES	14			16			18			20			22		
SIZE OF SHEET	Wt. per Sheet	Wt. per Bundle	Sheets per Bundle	Wt. per Sheet	Wt. per Bundle	Sheets per Bundle	Wt. per Sheet	Wt. per Bundle	Sheets per Bundle	Wt. per Sheet	Wt. per Bundle	Sheets per Bundle	Wt. per Sheet	Wt. per Bundle	Sheets per Bundle
24 x 72	37.5	150	4	30.0	150	5	24.0	144	6	18.0	144	8	15.0	150	10
26 x 72	40.63	162	4	32.4	162	5	26.0	156	6	19.5	156	8	16.3	146	9
28 x 72	43.8	131	3	35.0	140	4	28.0	140	5	21.0	147	7	17.5	140	8
30 x 72	46.9	141	3	37.5	150	4	30.0	150	5	22.5	157	7	18.8	150	8
36 x 72	56.2	169	3	45.0	135	3	36.0	144	4	27.0	135	5	22.5	157	8
24 x 84	43.8	131	3	35.0	140	4	28.0	140	5	21.0	147	7	17.5	140	8
26 x 84	47.4	142	3	38.0	152	4	30.3	152	5	22.8	159	7	19.0	152	8
28 x 84	51.0	153	3	40.8	163	4	32.7	163	5	24.5	147	6	20.4	143	7
30 x 84	54.7	164	3	43.8	131	3	35.0	140	4	26.3	157	6	21.3	153	7
36 x 84	65.6	131	3	52.5	157	3	42.0	168	4	31.5	157	5	26.3	157	6
24 x 96	50.0	150	3	40.0	160	4	32.0	160	5	24.0	144	6	20.0	140	7
26 x 96	54.2	162	3	43.3	130	3	34.7	139	4	26.0	156	6	21.7	152	7
28 x 96	58.3	175	3	46.7	140	3	37.3	149	4	28.0	140	5	23.3	140	6
30 x 96	62.5	125	2	50.0	150	3	40.0	160	4	30.0	150	5	25.0	150	6
36 x 96	75.0	150	2	60.0	120	2	48.0	144	3	36.0	144	4	30.0	150	5
24 x 120	62.5	125	2	50.0	150	3	40.0	160	4	30.0	150	5	25.0	150	6
26 x 120	67.7	135	2	54.2	162	3	43.3	130	3	32.5	162	5	27.1	162	6
28 x 120	73.0	146	2	58.0	175	3	46.7	140	3	35.0	140	4	29.2	146	5
30 x 120	78.0	156	2	62.5	125	2	50.0	150	3	37.5	150	4	31.3	156	5
36 x 120	93.8	187	2	75.0	150	2	60.0	120	2	45.0	135	3	37.5	150	4
GAUGES	24			26			27			28			30		
24 x 72	12.0	144	12	9.0	144	16	8.3	148	18	7.5	150	20	6.0	150	25
26 x 72	13.0	143	11	9.8	146	15	8.9	143	16	8.1	146	18	5.5	149	23
28 x 72	14.0	154	11	10.5	147	14	9.6	154	16	9.8	149	17	7.0	147	21
30 x 72	15.0	150	10	11.3	146	13	10.3	144	14	9.4	150	16	7.5	150	20
36 x 72	18.0	144	8	13.5	148	11	12.4	148	12	11.3	146	13	9.0	144	16
24 x 84	14.0	154	11	10.5	147	14	9.7	144	15	8.8	149	17	7.0	147	21
26 x 84	15.2	152	10	11.4	148	13	10.4	146	14	9.5	152	16	7.6	144	19
28 x 84	16.3	147	9	12.3	147	12	11.2	146	13	10.2	143	14	8.2	155	19
30 x 84	17.5	140	8	13.1	144	11	12.0	144	12	10.9	153	14	8.8	149	17
36 x 84	21.0	147	7	15.8	142	9	14.4	144	10	13.1	144	11	10.5	147	14
24 x 96	16.0	144	9	12.0	144	12	11.0	143	13	10.0	150	15	8.0	144	18
26 x 96	17.3	156	9	13.0	143	11	11.9	143	12	10.8	152	14	8.7	147	17
28 x 96	18.7	149	8	14.0	154	11	12.9	154	12	11.7	153	13	9.3	149	16
30 x 96	20.0	140	7	15.0	150	10	13.8	151	11	12.5	150	12	10.0	150	15
36 x 96	24.0	144	6	18.0	144	8	16.5	148	9	15.0	150	10	12.0	144	12
24 x 101	16.8	151	9	12.6	151	12	11.5	139	12	10.5	147	14	...	...	...
26 x 101	18.2	146	8	13.6	150	11	12.5	150	12	11.4	148	13	...	...	...
28 x 101	19.6	157	8	14.7	147	10	13.5	148	11	12.2	147	12	...	...	...
30 x 101	21.0	147	7	15.7	142	9	14.4	145	10	13.1	145	11	...	...	...
36 x 101	25.2	151	6	18.9	151	8	17.3	156	9	15.7	142	9	...	...	...
24 x 120	20.0	140	7	15.0	150	10	13.8	151	11	12.5	150	12	10.0	150	15
26 x 120	21.7	152	7	16.3	146	9	14.9	149	10	13.6	149	11	10.9	152	14
28 x 120	23.3	140	6	17.5	140	8	16.0	144	9	14.6	146	10	11.7	163	14
30 x 120	25.0	150	6	18.8	150	8	17.2	155	9	15.7	156	10	12.5	150	12
36 x 120	30.0	150	5	22.5	157	7	20.6	165	8	18.8	150	8	15.0	150	10

We do not galvanize heavier than 10 gauge.

Any specified weight more than 2½ per cent., gauges 17 and lighter, and 5 per cent., gauges 16 and heavier, light to U. S. Standard Gauge, to be quoted on basis of next lighter gauge.

Items of odd size less than 4,000 pounds cannot be furnished.

NOTE—TONCAN METAL IS NOT FURNISHED LIGHTER THAN NO. 26 GAUGE BLACK AND NO. 28 GAUGE GALVANIZED.



**“Is There With
the Wear”**



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This Text Book and Catalog is a complete compendium of all necessary information in reference to Sheet Metal. Keep it handy for reference.







TONCAN
METAL